1. (Three times amended) An isolated nucleic acid molecule from *Magnaporthe grisea* strain 2539 comprising a segment of chromosome 1 approximately 1 kb in size and containing at least one open reading frame, the segment conferring rice cultivar CO39-specific avirulence to fungal plant pathogens that contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 or its complement under hybridization conditions comprising hybridization for at least 6 hours at 42°C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing conditions comprising 5 minutes at room temperature in 2X SSC and 1% SDS, followed by 15 minutes at room temperature in 2X SSC and 0.1% SDS; followed by 30 minutes to 1 hour at 37°C in 2X SSC and 0.1% SDS, followed by 2 hours at 55°C in 2X SSC and 0.1% SDS.

2. (Three times amended) The nucleic acid molecule of claim 1, having a nucleotide sequence that hybridizes with a portion of SEQ ID NO:1 or its complement, wherein the portion is an open reading frame located between nucleotides 582 and 850, wherein the hybridization conditions further comprise a final washing in 0.1X SSC, 0.1% SDS at 65°C for 15 minutes.

3. (Twice amended) The nucleic acid molecule of claim 2, comprising a portion of SEQ ID NO:1, wherein the portion is an open reading frame located between nucleotides 582 and 850.

4. (Amended) The nucleic acid molecule of claim 1, which encodes a polypeptide having the features of a polypeptide comprising SEQ ID NO:4.

6. (Twice amended) A vector for transforming cells, comprising the nucleic acid molecule of claim 1.

7. (Three times amended) A fungal or bacterial cell transformed with the vector of claim 6.

9. (Twice amended) The fungal or bacterial cell of claim 7 which is an epiphytic bacterial cell.

11. (Twice amended) An isolated nucleic acid molecule having a sequence selected from the group consisting of:

a) SEQ ID NO:1;

b) a segment of SEQ ID NO: 1 comprising an open reading frame located between nucleotides 582 and 850;

c) a sequence that hybridizes with the sequence of a) or b) or its complement under conditions comprising hybridization for 16 hours at 42 C in 5X SSC, 5X Denhardt's reagent, 7% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.125M NaHPO4, 50% formamide and 1 mM EDTA, rinsing with 2X SSC at room temperature, and washing

once for 10 minutes and once for 15 minutes at 65 C in 2X SSC, followed by 15 minutes at 65 C in 0.1X SSC and 0.1% SDS; and

d) a sequence encoding a polypeptide having an amino acid sequence comprising SEQ ID NO:4.

13. (Twice amended) A vector for transforming cells, comprising the nucleic acid molecule of claim 11.

14. (Three times amended) A fungal or bacterial cell transformed with the vector of claim 13.

16. (Twice amended) The fungal or bacterial cell of claim 14, which is an epiphytic bacterial cell.

25. (Twice amended) A transgenic epiphytic bacterium that expresses a portion of an isolated nucleic acid molecule from *Magnaporthe grisea* strain 2539 comprising a segment of chromosome 1 approximately 1 kb in size and containing at least one open reading frame, the segment conferring rice cultivar CO39-specific avirulence to fungal plant pathogens that contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 or its complement under hybridization conditions comprising hybridization for at least 6 hours at 42 C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 μg ml denatured, fragmented

salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing conditions comprising 5 minutes at room temperature in 2X SSC and 1% SDS, followed by 15 minutes at room temperature in 2X SSC and 0.1% SDS; followed by 30 minutes to 1 hour at 37°C in 2X SSC and 0.1% SDS, followed by 2 hours at 55°C in 2X SSC and 0.1% SDS.

26. (Three times amended) The transgenic epiphytic bacterium of claim 24, which expresses the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.